

CLAIMS

1. A device for adhering at least one cell in a specific and predetermined pattern comprising:
a plate defining a surface, and
a plurality of cytophilic islands that adhere cells on said surface isolated by cytophobic
5 regions to which cells do not adhere contiguous with said cytophilic islands, wherein said
cytophilic islands are formed of a self-assembled monolayer and said
cytophobic regions are sufficiently wide to prevent cells adhered to said cytophilic islands from
contacting each other except via formation of cellular bridges above and free of adhesive contact
with said cytophobic regions.

10 2. A device for adhering at least one cell in a specific and predetermined pattern comprising:
a plate defining a surface, and
a plurality of cytophilic islands that adhere cells on said surface isolated by cytophobic
regions to which cells do not adhere formed of a self-assembled monolayer contiguous with said
15 cytophilic islands, wherein said cytophobic regions are sufficiently wide to prevent cells adhered
to said cytophilic islands from contacting each other except via formation of cellular bridges
above and free of adhesive contact with said cytophobic regions.

20 3. In a method for culturing cells on a surface or in a medium on a surface,
the improvement comprising:
providing a plate defining a surface and a plurality of cytophilic islands that adhere cells
on the surface isolated by cytophobic regions to which cells do not adhere contiguous with said
cytophilic islands, wherein said cytophilic islands are formed of a self-assembled monolayer and
said cytophobic regions are sufficiently wide to prevent cells adhered to said cytophilic islands
25 from contacting each other except via formation of cellular bridges above and free of adhesive
contact with said cytophobic regions; and
culturing the cells on one or more of the cytophilic islands or in a medium on a said one
or more cytophilic islands.